

What is claimed is:

1. A power supply for an implantable cardioverter-defibrillator for subcutaneous positioning between the third rib and the twelfth rib
5 and using a lead system that does not directly contact a patient's heart or reside in the intrathorasic blood vessels and for providing anti-tachycardia pacing energy to the heart, the power supply comprising:

10 a capacitor subsystem for storing the anti-tachycardia pacing energy for delivery to the patient's heart; and

15 a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-tachycardia pacing energy to the capacitor subsystem.

2. The power supply of claim 1, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately one milliamp to approximately 250 milliamps.
20

3. The power supply of claim 2, wherein the anti-tachycardia pacing energy comprises a biphasic

waveform having a peak current that is approximately one milliamp to approximately 50 milliamps.

4. The power supply of claim 2, wherein the
5 anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 50 milliamps to approximately 100 milliamps.

10 5. The power supply of claim 2, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 100 milliamps to approximately 150 milliamps.

15 6. The power supply of claim 2, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 150 milliamps to approximately 200 milliamps.

20 7. The power supply of claim 2, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 200 milliamps to approximately 250 milliamps.

8. The power supply of claim 1, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 1 millisecond to approximately 40 milliseconds.

5

9. The power supply of claim 8, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 1 millisecond to approximately 10 milliseconds.

10

10. The power supply of claim 8, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

15

11. The power supply of claim 8, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

20

12. The power supply of claim 8, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

13. The power supply of claim 1, wherein the
anti-tachycardia pacing energy comprises a biphasic
waveform further comprising a portion that is
5 positive in polarity and a portion that is negative
in polarity.

14. The power supply of claim 1, wherein the
anti-tachycardia pacing energy comprises a biphasic
10 waveform that is provided at a rate of approximately
100 to approximately 350 stimuli/minute.

15. The power supply of claim 14, wherein the
biphasic waveform is provided after a patient's heart
15 rate is equal to or greater than approximately 100
beats/minute.

16. The power supply of claim 15, wherein the
biphasic waveform is provided after a patient's heart
20 rate is associated with a monomorphic ECG pattern.

17. The power supply of claim 1, wherein the
lead system comprises an electrode located proximate

the sternum and anterior portion of the patient's heart.

18. The power supply of claim 1, wherein the
5 anti-tachycardia pacing energy comprises burst
pacing.

19. The power supply of claim 1, wherein the
anti-tachycardia pacing energy comprises ramp pacing.
10

20. The power supply of claim 1, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
one milliamp to approximately 250 milliamps.
15

21. The power supply of claim 20, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
one milliamp to approximately 50 milliamps.
20

22. The power supply of claim 20, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
50 milliamps to approximately 100 milliamps.

23. The power supply of claim 20, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
5 100 milliamps to approximately 150 milliamps.

24. The power supply of claim 20, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
10 150 milliamps to approximately 200 milliamps.

25. The power supply of claim 20, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a peak current that is approximately
15 200 milliamps to approximately 250 milliamps.

26. The power supply of claim 1, wherein the
anti-tachycardia pacing energy comprises a monophasic
waveform having a pulse width that is approximately 1
20 millisecond to approximately 40 milliseconds.

27. The power supply of claim 26, wherein the
anti-tachycardia pacing energy comprises a monophasic

waveform having a pulse width that is approximately 1 millisecond to approximately 10 milliseconds.

28. The power supply of claim 26, wherein the
5 anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

29. The power supply of claim 26, wherein the
10 anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

30. The power supply of claim 26, wherein the
15 anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

31. The power supply of claim 1, wherein the
20 anti-tachycardia pacing energy comprises a monophasic waveform that is either positive or negative in polarity.

32. The power supply of claim 1, wherein the anti-tachycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 100 to approximately 350 stimuli/minute.

5

33. The power supply of claim 32, wherein the monophasic waveform is provided after a patient's heart rate is equal to or greater than approximately 100 beats/minute.

10

34. The power supply of claim 33, wherein the monophasic waveform is provided after a patient's heart rate is associated with a monomorphic ECG pattern.

15

35. The power supply of claim 1, wherein the lead system comprises an electrode located proximate the sternum and anterior portion of the patient's heart.

20

36. The power supply of claim 1, wherein the anti-tachycardia pacing energy comprises burst pacing.

37. The power supply of claim 1, wherein the anti-tachycardia pacing energy comprises ramp pacing.

5 38. Current output system for an implantable cardioverter-defibrillator using a lead system that does not directly contact a patient's heart or reside in the intrathorasic blood vessels and for providing anti-tachycardia pacing energy to the heart, the
10 power supply comprising:

an energy storage system for storing the anti-tachycardia pacing energy for delivery to the patient's heart; and

15 an energy source system electrically coupled to the capacitor subsystem for providing the anti-tachycardia pacing energy to the capacitor subsystem.

20 39. Current output system of claim 38, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately one milliamp to approximately 250 milliamps.

5

40. Current output system of claim 39, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately one milliamp to approximately 50 milliamps.

10

41. Current output system of claim 39, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 50 milliamps to approximately 100 milliamps.

15

42. Current output system of claim 39, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 100 milliamps to approximately 150 milliamps.

20

43. Current output system of claim 39, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 150 milliamps to approximately 200 milliamps.

44. Current output system of claim 39, wherein
the anti-tachycardia pacing energy comprises a
biphasic waveform having a peak current that is
5 approximately 200 milliamps to approximately 250
milliamps.

45. Current output system of claim 38, wherein
the anti-tachycardia pacing energy comprises a
10 biphasic waveform having a pulse width that is
approximately 1 millisecond to approximately 40
milliseconds.

46. Current output system of claim 45, wherein
15 the anti-tachycardia pacing energy comprises a
biphasic waveform having a pulse width that is
approximately 1 millisecond to approximately 10
milliseconds.

20 47. Current output system of claim 45, wherein
the anti-tachycardia pacing energy comprises a
biphasic waveform having a pulse width that is
approximately 10 milliseconds to approximately 20
milliseconds.

48. Current output system of claim 45, wherein
the anti-tachycardia pacing energy comprises a
biphasic waveform having a pulse width that is
5 approximately 20 milliseconds to approximately 30
milliseconds.

49. Current output system of claim 45, wherein
the anti-tachycardia pacing energy comprises a
10 biphasic waveform having a pulse width that is
approximately 30 milliseconds to approximately 40
milliseconds.

50. Current output system of claim 38, wherein
15 the anti-tachycardia pacing energy comprises a
biphasic waveform further comprising a portion that
is positive in polarity and a portion that is
negative in polarity.

20 51. Current output system of claim 38, wherein
the anti-tachycardia pacing energy comprises a
biphasic waveform that is provided at a rate of
approximately 100 to approximately 350
stimuli/minute.

52. Current output system of claim 51, wherein
the biphasic waveform is provided after a patient's
heart rate is equal to or greater than approximately
5 100 beats/minute.

53. The current output system of claim 52,
wherein the biphasic waveform is provided after a
patient's heart rate is associated with a monomorphic
10 ECG pattern.

54. The current output system of claim 38,
wherein the lead system comprises an electrode
located proximate the sternum and anterior portion of
15 the patient's heart.

55. The current output system of claim 38,
wherein the anti-tachycardia pacing energy comprises
burst pacing.

20 56. The current output system of claim 38,
wherein the anti-tachycardia pacing energy comprises
ramp pacing.

5

57. Current output system of claim 38, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a peak current that is
approximately one milliamp to approximately 250
milliamps.

10

58. Current output system of claim 57, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a peak current that is
approximately one milliamp to approximately 50
milliamps.

15

59. Current output system of claim 57, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a peak current that is
approximately 50 milliamps to approximately 100
milliamps.

20

60. Current output system of claim 57, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a peak current that is
approximately 100 milliamps to approximately 150
milliamps.

61. Current output system of claim 57, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a peak current that is
5 approximately 150 milliamps to approximately 200
milliamps.

62. Current output system of claim 57, wherein
the anti-tachycardia pacing energy comprises a
10 monophasic waveform having a peak current that is
approximately 200 milliamps to approximately 250
milliamps.

63. Current output system of claim 38, wherein
15 the anti-tachycardia pacing energy comprises a
monophasic waveform having a pulse width that is
approximately 1 millisecond to approximately 40
milliseconds.

20 64. Current output system of claim 63, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a pulse width that is
approximately 1 millisecond to approximately 10
milliseconds.

65. Current output system of claim 63, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform having a pulse width that is
5 approximately 10 milliseconds to approximately 20
milliseconds.

66. Current output system of claim 63, wherein
the anti-tachycardia pacing energy comprises a
10 monophasic waveform having a pulse width that is
approximately 20 milliseconds to approximately 30
milliseconds.

67. Current output system of claim 63, wherein
15 the anti-tachycardia pacing energy comprises a
monophasic waveform having a pulse width that is
approximately 30 milliseconds to approximately 40
milliseconds.

20 68. Current output system of claim 38, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform further comprising a positive
voltage portion.

69. Current output system of claim 38, wherein
the anti-tachycardia pacing energy comprises a
monophasic waveform that is provided at a rate of
approximately 100 to approximately 350
5 stimuli/minute.

70. Current output system of claim 69, wherein
the monophasic waveform is provided after a patient's
heart rate is equal to or greater than approximately
10 100 beats/minute.

71. The current output system of claim 70,
wherein the monophasic waveform is provided after a
patient's heart rate is associated with a monomorphic
15 ECG pattern.

72. The current output system of claim 38,
wherein the lead system comprises an electrode
located proximate the sternum and anterior portion of
20 the patient's heart.

73. The current output system of claim 38,
wherein the anti-tachycardia pacing energy comprises
burst pacing.

5 74. The current output system of claim 38,
wherein the anti-tachycardia pacing energy comprises
ramp pacing.

10 75. An implantable cardioverter-defibrillator
for subcutaneous positioning between the third rib
and the twelfth rib within a patient, the implantable
cardioverter-defibrillator comprising:

a housing having an electrically conductive
surface on an outer surface of the housing;

15 a lead assembly electrically coupled to the
housing and having an electrode, wherein the lead
assembly does not directly contact the patient's
heart or reside in the intrathorasic blood vessels;

20 a capacitor subsystem located within the housing
and electrically coupled to the electrically
conductive surface and the electrode for storing
anti-tachycardia pacing energy and for delivering the
anti-tachycardia pacing energy to the patient's heart

through the electrically conductive surface and the electrode; and

a battery subsystem electrically coupled to the capacitor subsystem for providing the anti-tachycardia pacing energy to the capacitor subsystem.

5

76. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately one milliamp to approximately 250 milliamps.

10

77. The implantable cardioverter-defibrillator of claim 76, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately one milliamp to approximately 50 milliamps.

15

78. The implantable cardioverter-defibrillator of claim 76, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 50 milliamps to approximately 100 milliamps.

20

79. The implantable cardioverter-defibrillator
of claim 76, wherein the anti-tachycardia pacing
energy comprises a biphasic waveform having a peak
5 current that is approximately 100 milliamps to
approximately 150 milliamps.

80. The implantable cardioverter-defibrillator
of claim 76, wherein the anti-tachycardia pacing
10 energy comprises a biphasic waveform having a peak
current that is approximately 150 milliamps to
approximately 200 milliamps.

81. The implantable cardioverter-defibrillator
15 of claim 76, wherein the anti-tachycardia pacing
energy comprises a biphasic waveform having a peak
current that is approximately 200 milliamps to
approximately 250 milliamps.

20 82. The implantable cardioverter-defibrillator
of claim 76, wherein the anti-tachycardia pacing
energy comprises a biphasic waveform having a pulse
width that is approximately 1 millisecond to
approximately 40 milliseconds.

5

83. The implantable cardioverter-defibrillator of claim 82, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 1 millisecond to approximately 10 milliseconds.

10

84. The implantable cardioverter-defibrillator of claim 82, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

15

85. The implantable cardioverter-defibrillator of claim 82, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 20 milliseconds to approximately 30 milliseconds.

20

86. The implantable cardioverter-defibrillator of claim 82, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 30 milliseconds to approximately 40 milliseconds.

87. The implantable cardioverter-defibrillator
of claim 75, wherein the anti-tachycardia pacing
energy comprises a biphasic waveform further
5 comprising a portion that is positive in polarity and
a portion that is negative in polarity.

88. The implantable cardioverter-defibrillator
of claim 75, wherein the anti-tachycardia pacing
energy comprises a biphasic waveform that is provided
10 at a rate of approximately 100 to approximately 350
stimuli/minute.

89. The implantable cardioverter-defibrillator
15 of claim 88, wherein the biphasic waveform is
provided after a patient's heart rate is equal to or
greater than approximately 100 beats/minute.

90. The implantable cardioverter-defibrillator
20 of claim 89, wherein the monophasic waveform is
provided after a patient's heart rate is associated
with a monomorphic ECG pattern.

91. The implantable cardioverter-defibrillator of claim 75, wherein the lead system comprises an electrode located proximate the sternum and anterior portion of the patient's heart.

5

92. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises burst pacing.

10

93. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises ramp pacing.

15

94. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately one milliamp to approximately 250 milliamps.

20

95. The implantable cardioverter-defibrillator of claim 94, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak

current that is approximately one milliamp to
approximately 50 milliamps.

96. The implantable cardioverter-defibrillator
5 of claim 94, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a peak
current that is approximately 50 milliamps to
approximately 100 milliamps.

10 97. The implantable cardioverter-defibrillator
of claim 94, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a peak
current that is approximately 100 milliamps to
approximately 150 milliamps.

15 98. The implantable cardioverter-defibrillator
of claim 94, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a peak
current that is approximately 150 milliamps to
20 approximately 200 milliamps.

99. The implantable cardioverter-defibrillator
of claim 94, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a peak

current that is approximately 200 milliamps to approximately 250 milliamps.

100. The implantable cardioverter-defibrillator
5 of claim 75, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a pulse
width that is approximately 1 millisecond to
approximately 40 milliseconds.

101. The implantable cardioverter-defibrillator
of claim 100, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a pulse
width that is approximately 1 millisecond to
approximately 10 milliseconds.

15
102. The implantable cardioverter-defibrillator
of claim 100, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a pulse
width that is approximately 10 milliseconds to
20 approximately 20 milliseconds.

103. The implantable cardioverter-defibrillator
of claim 100, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a pulse

width that is approximately 20 milliseconds to approximately 30 milliseconds.

104. The implantable cardioverter-defibrillator
5 of claim 100, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform having a pulse
width that is approximately 30 milliseconds to
approximately 40 milliseconds.

10 105. The implantable cardioverter-defibrillator
of claim 75, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform that is either
positive or negative in polarity.

15 106. The implantable cardioverter-defibrillator
of claim 105, wherein the anti-tachycardia pacing
energy comprises a monophasic waveform that is
provided at a rate of approximately 100 to
approximately 350 stimuli/minute.

20 107. The implantable cardioverter-defibrillator
of claim 106, wherein the monophasic waveform is
provided after a patient's heart rate is equal to or
greater than approximately 100 beats/minute.

5

108. The implantable cardioverter-defibrillator of claim 107, wherein the monophasic waveform is provided after a patient's heart rate is associated with a monomorphic ECG pattern.

10

109. The implantable cardioverter-defibrillator of claim 75, wherein the lead system comprises an electrode located proximate the sternum and anterior portion of the patient's heart.

15

110. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises burst pacing.

111. The implantable cardioverter-defibrillator of claim 75, wherein the anti-tachycardia pacing energy comprises ramp pacing.

112. A method for supplying power for an
implantable cardioverter-defibrillator for
subcutaneous positioning between the third rib and
the twelfth rib and using a lead system that does not
5 directly contact a patient's heart or reside in the
intrathorasic blood vessels and for providing anti-
tachycardia pacing energy to the heart, the method
comprising:

10 generating anti-tachycardia pacing energy;
storing the anti-tachycardia pacing energy; and
delivering the anti-tachycardia pacing energy to
the patient's heart.

113. The method of claim 112, wherein the anti-
tachycardia pacing energy comprises a biphasic
waveform having a peak current that is approximately
one milliamp to approximately 250 milliamps.

114. The method of claim 113, wherein the anti-
tachycardia pacing energy comprises a biphasic
waveform having a peak current that is approximately
one milliamp to approximately 50 milliamps.

115. The method of claim 113, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 50 milliamps to approximately 100 milliamps.

5

116. The method of claim 113, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 100 milliamps to approximately 150 milliamps.

10

117. The method of claim 113, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 150 milliamps to approximately 200 milliamps.

15

118. The method of claim 113, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a peak current that is approximately 200 milliamps to approximately 250 milliamps.

20

119. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 1 millisecond to approximately 40 milliseconds.

120. The method of claim 119, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately 1
5 millisecond to approximately 10 milliseconds.

121. The method of claim 119, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately
10 10 milliseconds to approximately 20 milliseconds.

122. The method of claim 119, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately
15 20 milliseconds to approximately 30 milliseconds.

123. The method of claim 119, wherein the anti-tachycardia pacing energy comprises a biphasic waveform having a pulse width that is approximately
20 30 milliseconds to approximately 40 milliseconds.

124. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a biphasic waveform further comprising a portion that is

positive in polarity and a portion that is negative in polarity.

125. The method of claim 112, wherein the anti-
5 tachycardia pacing energy comprises a biphasic waveform that is provided at a rate of approximately 100 to approximately 350 stimuli/minute.

126. The method of claim 125, wherein the 10 biphasic waveform is provided after a patient's heart rate is equal to or greater than approximately 100 beats/minute.

127. The method of claim 126, wherein the 15 biphasic waveform is provided after a patient's heart rate is associated with a monomorphic ECG pattern.

128. The method of claim 112, wherein the lead system comprises an electrode located proximate the 20 sternum and anterior portion of the patient's heart.

129. The method of claim 112, wherein the anti- tachycardia pacing energy comprises burst pacing.

130. The method of claim 112, wherein the anti-tachycardia pacing energy comprises ramp pacing.

5 131. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately one milliamp to approximately 250 milliamps.

10 132. The method of claim 131, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately one milliamp to approximately 50 milliamps.

15 133. The method of claim 131, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately 50 milliamps to approximately 100 milliamps.

20 134. The method of claim 131, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately 100 milliamps to approximately 150 milliamps.

135. The method of claim 131, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately 150 milliamps to approximately 200 milliamps.

5

136. The method of claim 131, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a peak current that is approximately 200 milliamps to approximately 250 milliamps.

10

137. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 1 millisecond to approximately 40 milliseconds.

15

138. The method of claim 137, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 1 millisecond to approximately 10 milliseconds.

20

139. The method of claim 137, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10 milliseconds to approximately 20 milliseconds.

140. The method of claim 137, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 5. 20 milliseconds to approximately 30 milliseconds.

141. The method of claim 137, wherein the anti-tachycardia pacing energy comprises a monophasic waveform having a pulse width that is approximately 10. 30 milliseconds to approximately 40 milliseconds.

142. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a monophasic waveform that is either positive or negative in 15. polarity.

143. The method of claim 112, wherein the anti-tachycardia pacing energy comprises a monophasic waveform that is provided at a rate of approximately 20. 100 to approximately 350 stimuli/minute.

144. The method of claim 143, wherein the monophasic waveform is provided after a patient's

heart rate is equal or less than approximately 100 beats/minute.

145. The method of claim 144, wherein the
5 monophasic waveform is provided after a patient's
heart rate is associated with a monomorphic ECG
pattern.

146. The method of claim 112, wherein the lead
10 system comprises an electrode located proximate the
sternum and anterior portion of the patient's heart.

147. The method of claim 112, wherein the anti-
tachycardia pacing energy comprises burst pacing.
15

148. The method of claim 112, wherein the anti-
tachycardia pacing energy comprises ramp pacing.

149. The power supply of claim 1, wherein the
20 battery subsystem and the capacitor system provide a
sufficient voltage to provide an anti-tachycardia pacing
energy comprising an approximately constant current.